AMENDMENTS TO THE DRAWINGS:

The attached sheets of drawings include changes to Figures 1, 2, 5, and 8-10. These sheets (which Figures 1, 2, 5, and 8-10) replace the original drawing sheets for Figures 1, 2, 5, and 8-10.

REMARKS

Favorable action on the merits is solicited in view of the foregoing amendments and the following Remarks.

I. Claim Status & Amendments

Applicants appreciate the Examiner's withdrawal of the election of species requirement set forth in the last Official Action.

Claims 1-25 were pending in this application when last examined.

Claims 1, 5, 18, 23, and 24 stand rejected.

Claims 2-4, 6-17, 19-22, and 25 were objected to as being based on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. See page 5 of the Official Action. Applicants appreciate the Examiner's indication of allowable subject matter.

Minor editorial revisions have been made to the claims to better conform to U.S. claim form and practice. Such revisions are non-substantive and not intended to narrow the scope of protection. Such revisions include: replacing the "characterized by" language with "wherein"; correcting punctuation; revising the beginning of the claims to recite "A" or "The"; and revising the claim language to provide proper antecedent basis throughout the claims.

Claims 11, 12, 13, 14, 15, and 16 are amended to remove the "preferentially" language and the limitations thereafter that have been added back in new dependent claims 26, 27, 28, 29, 30, and 31, respectively, to better conform to US practice. Support for new the claims can be found in original claims 11, 12, 13, 14, 15, and 16. Similarly, claim 17 is amended to remove the "preferably" and to use the alternative "or." Support can be found in original claim 17.

No new matter has been added by the above amendments.

Claim 8 has been cancelled without prejudice or disclaimer thereto. Applicants reserve the right to file a continuation or divisional application on any cancelled subject matter.

Claims 1-7 and 9-31 are pending upon entry of this amendment.

Applicants have attached herewith replacement drawing sheets for new Figures 1, 2, 5, and 8-10 to replace original drawing sheets for Figures 1, 2, 5, and 8-10. No new matter has been added.

The specification is amended to include appropriate section headings. No new matter has been added.

II. Information Disclosure Statement

The Official Action, at page 2, indicated that certain references in the Information Disclosure Statement (IDS) of August 30, 2006 have not been considered on the basis that copies were not provided to the Office. Applicants respectfully disagree and submit that the references should have been officially considered by the Office for the following reasons.

It should be noted that: (i) the instant application is a 371 National Stage application of PCT/FR2004/003022; and (ii) a copy of the search report from the corresponding French application was previously submitted with the August 30, 2006 IDS. Pursuant to the trilateral agreement between the USPTO, EPO and JPO, it is believed that copies of the cited references should have been forwarded to the USPTO by the International Search Authority. Thus, the references should have been considered as they should be of record at the USPTO.

In the interest of advancing prosecution, Applicants have submitted herewith a new PTO-1449 Form along with copies of the following four non-patent literature references that were cited but not considered by the Examiner:

1. Zhuang et al., Applied Physics Letters, vol. 75, no. 19. pp. 3008-3010, November 8, 1999(XP-000 875 975);

2. Martinot-Lagarde et al., Liquid Crystal Materials, Devices and Applications XI, Liang-Chy Chien, editor, SPIE-IS&T Electronic Imaging, SPEI vol. 5003, pp. 25-34, 2003, (XP-002 317 405);

3. Qian et al., "Dynamic flow, broken surface anchoring, and switching bistability in three-terminal twisted nematic liquid crystal displays", Journal of Applied Physics, vol. 90, no. 6, pp. 3121-3123 (2001);

4. Guo et a l., "Three terminal bistable twisted nematic liquid crystal displays", Applied Physics letters, vol. 77, no. 23, pp. 3716-3718, December 2000.

Applicants ask that the references be considered at this time as they should have been forwarded from the International Search Authority pursuant to the trilateral agreement. Kindly consider these references and return an Examiner-initialed copy of PTO-1449 form indicating such.

Applicants do not believe that a fee is due at this time. However, if the Patent Office is of a different opinion, the Patent Office is authorized to charge the Deposit Account No. 25-0120 the fee for filing the IDS at this stage of prosecution.

III. Objections to the Drawings

The drawings were objected to because: (i) Figures 2, 5, and 8-10 do not contain properly labeled axes, and (ii) Figure 1 contains excessive shading. See page 3 of the Official Action.

As noted above, Applicants have attached herewith replacement drawing sheets for new Figures 1, 2, 5, and 8-10 to replace the corresponding original drawing sheets. The

replacement drawing sheets contain revised drawing figures that the noted informalities in the drawings. Thus, the present amendment overcomes this objection to the drawings.

IV. Claim Objection

Claim 8 was objected to for the reasons on page 4 of the Official Action.

For the sole purpose of expediting prosecution and not to acquiesce to this objection, Applicants have cancelled claim 8 without prejudice or disclaimer thereto. Thus, the present amendment renders the objection moot.

V. Prior Art Rejection

Claims 1, 5, 18, 23, and 24 were rejected under 35 U.S.C. § 102(b) as anticipated Barberi (US 6,327,017) for the reasons set forth on pages 4-5 of the Official Action. This rejection is respectfully traversed.

Applicants would first like to draw the attention of the Examiner some conceptual differences between the disclosure of Barberi and the instant application.

1) Differences in Angle α

Barberi discloses an angle α (figure 17 and col. 8 lines 38-47) that is the angle between two liquid crystal molecules on the two substrates, and corresponds to the twist of a liquid crystal texture.

This angle is different from angle α defined in the instant application. According to the instant application (see, for instance, figure 1 and page 5, lines 14-16), angle α corresponds to the angle between:

- the liquid crystal molecule on the substrate 30 which is not on the observer side, and
- the polarizer 40 which is not the observer side.

2) Differences in Rotational Hydrodynamic coupling/rotatory power

The rotational hydrodynamic coupling described by Barberi (col. 8 lines 38-51) is a concept different of the rotatory power described in the invention.

Rotational hydrodynamic coupling is related to hydrodynamic coupling between liquid crystal molecules explained and optimized in Barberi (col.7, line 41 to col. 8, line 47). This coupling is related to interactions between liquid crystal molecules in the liquid crystal cell. The rotational hydrodynamic coupling is a physical effect describing an interaction between the liquid crystal molecules inside the liquid crystal cell.

By contrast, the rotatory power described in the instant application is an optical effect of the most twisted texture. See page 14, line 22 to page 15, line 2 of the instant application. Typically, when a linear polarisation P crosses the liquid crystal cell in the T texture, then the

output polarisation is rotated of an angle PR equal to the rotatory power. Whatever the angle of P, then the output polarization angle ψ after crossing the T texture can be deduced by the formula $\psi = P + PR$ (page 15 line 7 of the application). The rotatory power is an optical effect on the light polarization crossing the liquid crystal cell.

In this regard, it should be noted that the nematic liquid crystal display device presenting two stable states in independent claim 1, requires "the orientation of the two polarizers being shifted by a value equal to the rotatory power of the cell +/- $\pi/2$, the rotatory power corresponding to the effect of the most twisted texture." Similarly, the method of independent claim 18 requires "the steps consisting of calculating the rotatory power of the cell and positioning the two polarizers (10, 40), the first polarizer(10) being placed on the side of the observer, the other polarizer (40) being placed on the opposite face of the liquid crystal cell, according to an orientation shifted by a value equal to the rotatory power of the cell +/- $\pi/2$, the rotatory power corresponding to the effect of the most twisted texture."

Applicants respectfully submit that Barberi fails to disclose these features of the independent claims. Barberi does not disclose or even suggest the concept of rotatory power or the value of the rotatory power in a liquid cell. Also, Barberi does not disclose precisely the value of the

shift between the two polarizer of a liquid cell. Indeed, Barberi just vaguely discloses that "the optical contrast between the two states of such a pixel depends on the thickness of the specimen and on the orientation of the polarizers and analyzers used" (see col. 8, lines 64-67 of Barberi).

For these reasons, it is clear that Barberi does not disclose or even suggest that the orientation of the two polarizers are shifted by a value equal to the rotatory power of the cell $\pm \pi/2$ as required in independent claims 1 and 18.

It is well established that to anticipate a claim, a cited prior art reference must disclose or suggest each and every element of the claimed invention. Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); and M.P.E.P., Eighth Ed., Rev. 6 (September 2007) at § 2131.

Applicants respectfully submit that the rejection fails, because Barberi fails to disclose each and every element of independent claims 1 and 18 for the above-noted reasons. Thus, claims 1 and 18 are believed to be novel and patentable over Barberi. Dependent claims 2-7, 9-17, and 26-31 and are believed to be novel and patentable as being directly or indirectly dependent upon independent claim 1. Similarly, dependent claims 19-25 are believed to be novel and patentable

as being directly or indirectly dependent upon independent claim 18.

Thus, withdrawal of the 102(b) anticipation rejection of claims 1, 5, 18, 23, and 24 over Barberi is requested.

VI. Claim Objections & Allowable Subject Matter

Claims 2-4, 6-17, 19-22, and 25 were objected to as being based on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. See page 5 of the Official Action. Applicants again thank the Examiner for the indication of allowable subject matter.

Applicants appreciate the Office's indication of allowable subject matter. It is respectfully submitted that the above amendments and arguments overcome the remaining rejections, thereby obviating this objection. Thus, the objection should be withdrawn.

VII. Conclusion

Having addressed all the outstanding issues, the amendment is believed to be fully responsive. In view of the above, it is respectfully submitted that the application is in condition for allowance and notice to that effect is hereby requested. If the Examiner has any comments or proposals for

expediting prosecution, please contact the undersigned attorney at the telephone number below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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APPENDIX:

The Appendix includes the following item(s):

- new IDS PTO-1449 Form and copies of the following references:

  1. Zhuang et al., Applied Physics Letters, vol. 75, no. 19. pp. 3008-3010, November 8, 1999(XP-000 875 975);

  2. Martinot-Lagarde et al., Liquid Crystal Materials, Devices and Applications XI, Liang-Chy Chien, editor, SPIE-IS&T Electronic Imaging, SPEI vol. 5003, pp. 25-34, 2003, (XP-002 317 405);

  3. Qian et al., "Dynamic flow, broken surface anchoring, and switching bistability in three-terminal twisted nematic liquid crystal displays", Journal of Applied Physics, vol. 90, no. 6, pp. 3121-3123 (2001);

  4. Guo et al., "Three terminal bistable twisted nematic liquid crystal displays", Applied Physics letters, vol. 77, no. 23, pp. 3716-3718, December 2000.

- replacement drawing sheets for new Figures 1, 2, 5, and 8-10